

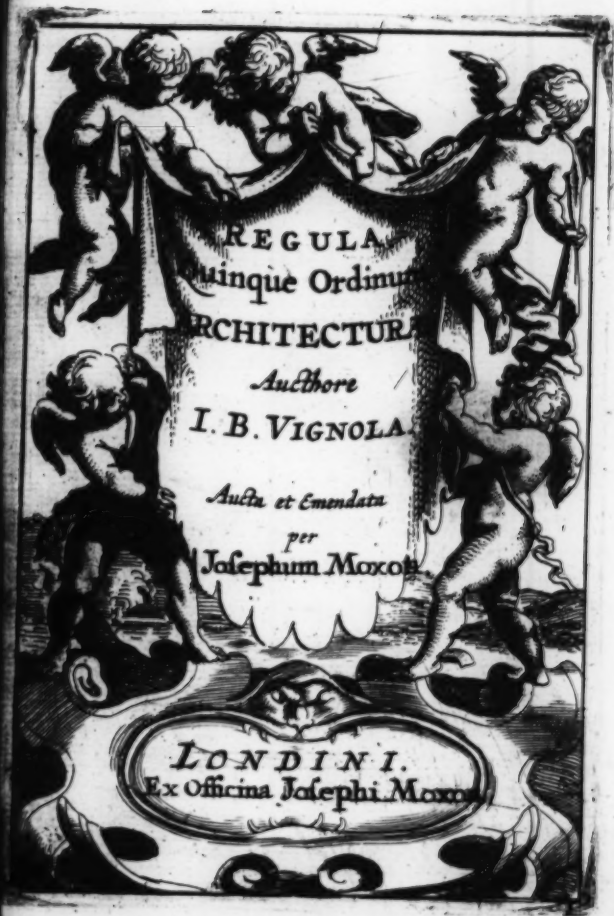
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VIGNOLA:

OR

THE COMPLEAT Architect.

Shewing in a Plain and Easie way the
Rules of the *Five Orders* in
ARCHITECTURE:

VIZ.

TUSCAN, DORICK, IONICK,
CORINTHIAN & COMPOSITE.

Whereby, any that can but Read and
Understand English, may readily learn the
Proportions that all *Members* in a *Building*
have one unto another.

Set forth by Mr. James Barozzio of Vignola.

Translated into English, By *Joseph Moxon.*

The Third Edition, with Additions.

2 Chron. 3 3, *Now these are the things wherein Solomon was instructed
for the building of the house of God, &c*

L O N O N.

Printed for *Joseph Moxon* and sold at his Shop
on *Ludgate Hill*, neer *Fleet Bridge*, at the
Signe of *ATLAS.* 1673.

VIGNOLA

OR

THE COMPOSITE

Architect

showing in Plans and Elevation
the Rules of the Five Orders
of Architecture
VIZ

THE DORIC ORDER
THE IONIC ORDER
THE CORINTHIAN ORDER
THE COMPOSITE ORDER

Wherby, any that are desirous
to learn the Art of Architecture,
may readily learn the
Rules of the Five Orders
of Architecture

And by the Help of the
Tables of the Five Orders
of Architecture, may be able
to draw the Plans and Elevations
of any Building

The Third Edition, with
Additions, by James
Vignola

Printed for James
Vignola, at the
Sign of the



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To the Ingenious Artift.



Have here presented you with the Works of Mr. James Barozzio of Vignola in English, who for his great Skill and knowledge in the Art of Architecture, is much respected, and highly applauded among all Artificers throughout

Christendome, there being few Nations of any note, that have not his works translated into their own Language: onely we here in England (I know not whether it be through carelesness in Artists, or else covetousness) mind not those things which make other Countries (that have nothing else to boast of) so famous among their Neighbours: Certain I am that England breeds as good wits as other Lands do, and would they but shew themselves more forward in commendable Studies, would doubtless share with them in their Praises.

Our Author first collected these things together for his own private use: and by the solicitations of many Persons of Worth and Honour, did at last (though unwillingly consent to make the World for a small price partakers of that which cost him so much labour, study and travail.

To the Reader.

And whereas former Authors left their Works uncertain, or at least doubtfull to all but their own Nations, in respect of the several measures they used; as some the Fathom, some the Foot, some the Span, some the Inch of their own particular Country, which seldome agrees with the Fathom, Foot or Inch of any other Land; our Author to avoid that great inconvenience, and certain uncertainty hath reduced all his measures to a convenient and universal measure, which is called by the name of a Model: the invention whereof hath made the whole Art of Architecture very easie to all Students therein: for it is nothing else but the half Diameter of the Column at the lower end thereof, as if the whole Diameter should be 10, 12, 14 or 16 inches, then will the half Diameter be 5, 6, 7, or 8 inches, and that is called the Model: which Model he divides into 12 equal parts, when he frames the Tuscan and Dorick Order: and into 18 for the Ionick, Corinthian and Composite.

In the Translation of this Book, I have followed (so near as I could) the words of our Author, unless here and there I have been a little more large: thereby endeavouring the better to express his meaning, and instruct the young Practitioner. I confess the Book was formerly translated by another hand, but it was so generally disliked (indeed not without cause) that I chose rather to take the pains to translate it a new, than run the hazard of discouraging young Artists with those dark and improper directions.

Now for the better instructions of such as desire to

study

To the Reader.

study this pleasant, profitable and commendable Art^s and yet are disconcerted by the strange words used therein, I have collected all the hard words together, and given you the meaning of them: that so when you find yourself puzzled with any word of Art, you need but have recourse to this Alphabetical Table, and find the explanation of any hard word used in this Book.

A

Abacus, the member marked L in number V.

Anulets, G numb X. Architrave. numb. I. word Architr. Astragaloës, B numb. XV.

B

Band, B numb. IV. Base, word Base numb. I.

C

Capital, numb. I. word Capital. Cathetus, a line drawn from the top of any thing to the bottom.

Cimatium, L numb. V. Composite Order, read numb. XXV. Corinthian Order, The name of Columns made after the manner described in numb. XIX. Cornice, numb. I word Cornice.

D

Dentils, B numb. X. Diagonal line, a line drawn from the two opposite Angles in a Square.

E

Equilateral Triangle, a Triangle whose sides are all of equal length.

F

Flutes, D numb. X. Frieze, numb. I. word Frieze.

G

Grooves, A numb. IX. Gula or throat F, numb. V. Ichno-

To the Reader:

I

Ichnography, the ground or Plot on which any thing is projected. Intersection, the point where two lines cross one the other. Ionick Order, The name of Columns made after the manner described in numb. XII.

L

List, C numb. V.

M

Metops, D numb. X. Model, I have just now told you what it is in this Epistle. Modilion, B numb. X.

O

Overture, an arch as is described between the Columns in numb. VII. Ovolo, A numb. V.

P

Pedestal, that whereon the Column stands, as in numb. VI. Perpendicular, a line that cuts a second line at right angles, is said to be perpendicular to the second line. Pilasters, the Pillars that stand behind the Columns, whereon the Arches rests: see numb. VII. Plinthus, D numb. IV. Profile, see Ichnography.

Q

Quadrant, the fourth part of a Circle.

R

Right angles, right angles are neither more nor less then square Corners.

S

Scroll, the winding figure in numb. XVIII is called a Scroll.

To the Reader.

Scroll. Scotia, A numb. XV. Semi-circle, half the circumference of a circle. Spiral line, the two outmost lines of the wreathed Column, numb. XXX. are called Spiral lines. Swathe, the same that Band is.

T

Triglyph, D numb. X. Tondino, B numb. V. Torus, A & B numb. XXII. Tuscan Order, the names of Columns made after the manner described in numb. I.

V

Voluta the same that Scroll is.

The understanding of this Table is so easie, that I shall not need to explain anything in it, that I know of: only take notice that where you see a Letter, as B C, &c, and numb. I. V. X. or the like follow any word, that then you are referred to the leaf marked with that number; therefore in that leaf seek for the same Letter, and the Member that that Letter stands in, is called by that name.

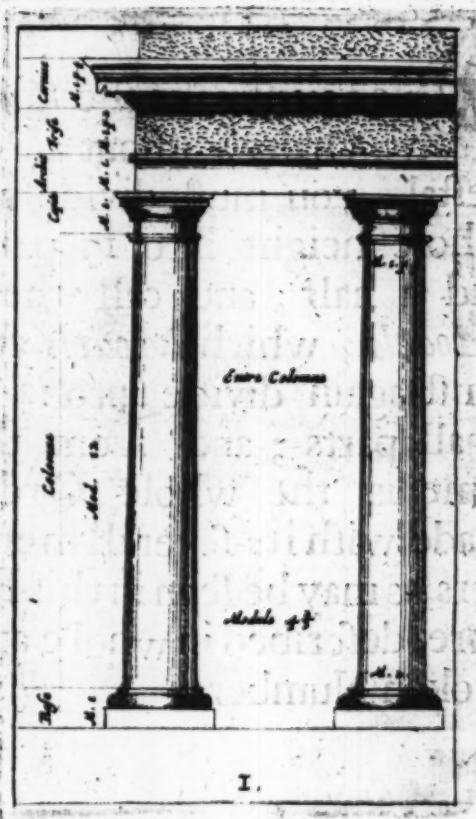
I know (some that are already sufficient Artists) may think the sleight of this Book, meerly because I have made it plain to common Capacities: But if such will but look back upon their own younger endeavours, they may perhaps remember the time when themselves would have been glad of any help that might have furthered them in their then-thought tedious and difficult Studies. Besides, they may also know, that it is easier for themselves to know the meaning of plain and easie expressions, than for young Students to understand the directions of hard and difficult Instructions.

Joseph Moxon.

I

BEcause I have not found among the Antiquities of *Rome* any *Tuscan* Ornaments, from whence I might frame a Rule, as I have done in the other Orders, *viz.* *Doric*, *Ionick*, *Corinthian* and *Composite*, I have made use of *Vitruvius* his Authority, in his 4th Book and 7th Chapter: where he saith, The *Tuscan* Order with *Base* and *Capital* must be 7 times its thickness: In the rest of the Ornaments, namely, the *Architrave Frieze* and *Cornice*, I believe that Rule ought to be followed which I found in the other four Orders, *viz.* that the *Architrave Frieze* and *Cornice* must be one fourth part of the *Column* with *Base* and *Capital*, which is 14 *Models*, as may be seen in the figure; And therefore the *Architrave Frieze* and *Cornice* ought to be 3 *Models* and an half, that being one fourth part of the 14 *Models* contained in the *Column*; as shall be mentioned in several other places.

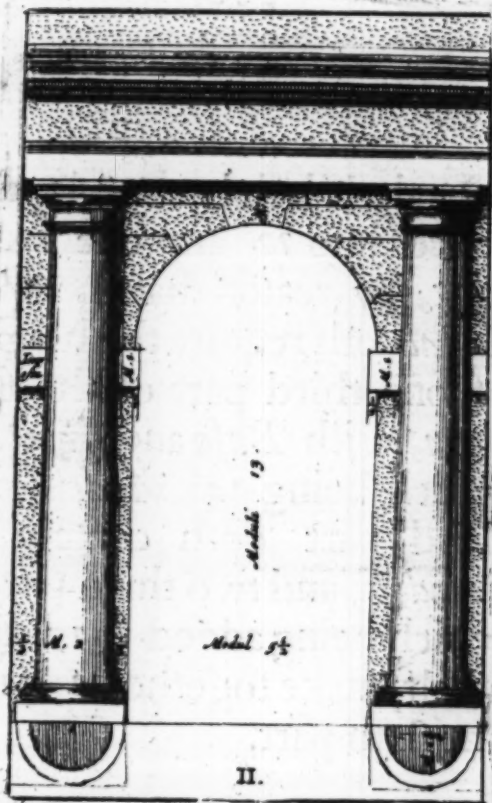
TUSCAN ORDER. 17



II.

WHEN you make the *Tus-*
can Order without a Pe-
destal, you must divide its
whole height into 17 parts
and a half, and call them
Models; which *Models* you
must again divide into 12 e-
quall parts; and from the
same is the whole Order
made with its severall mem-
bers, as may be seen in this Fi-
gure, described in whole and
broken Numbers.

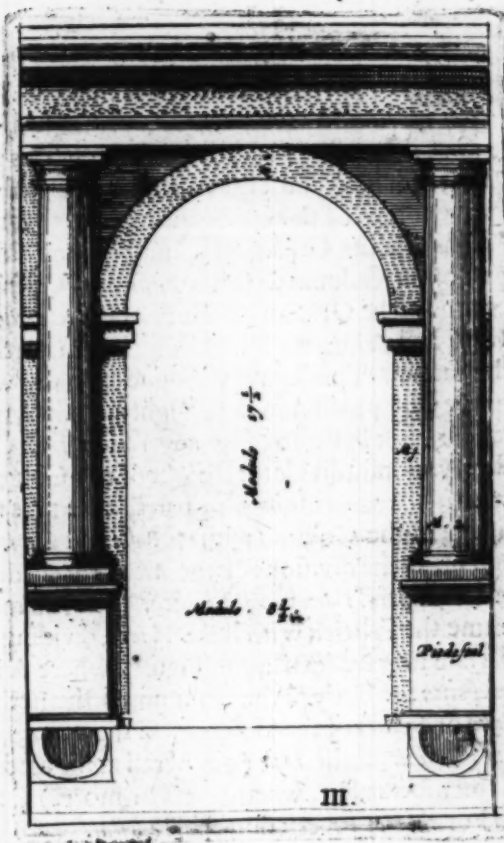
TUSCAN ORDER. 19



III.

When you make the same Order with a *Pedestal*, the whole height must be divided into 22 and one sixth part, by reason that the *Pedestal* doth require the height of one third part of the *Column*, with *Base* and *Capital*, which being 14 *Models*, its third part doth contain 4 *Models*, and two third parts; which being added to 17 and a half, make together 22; and one sixth part.

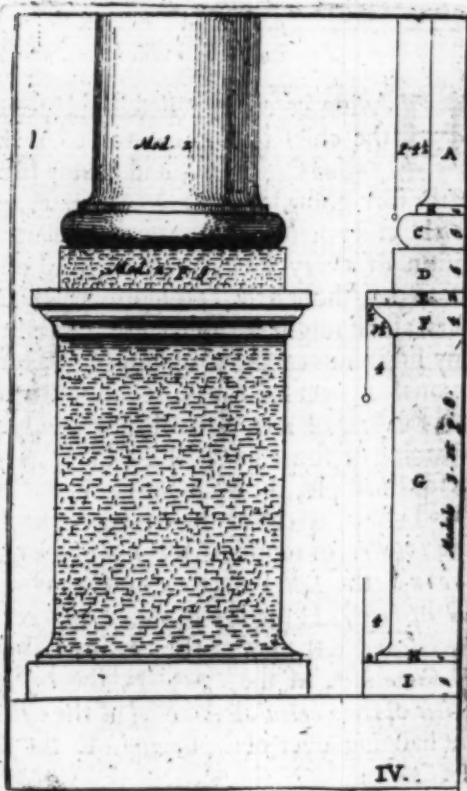
TUSCAN ORDER. 21



IV.

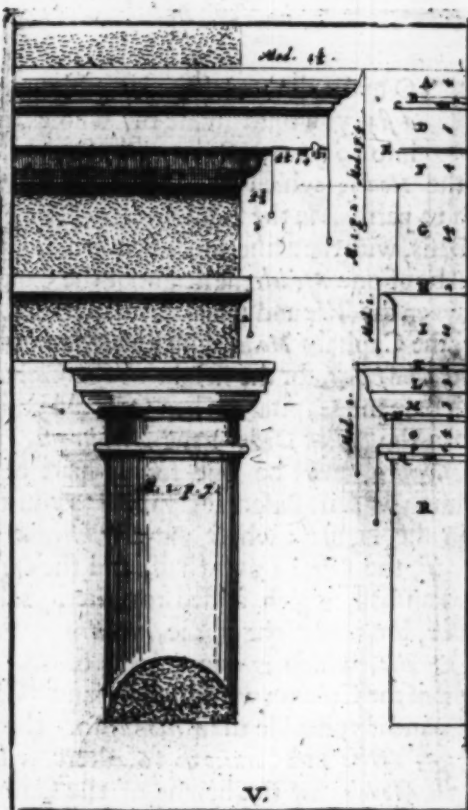
THough it seldome happen in the *Tuscan* Order to have a *Pedestal*, yet to follow the Order, I have set it forth in this Figure; advising you that in all the five Orders I have followed this for a generall rule, that the *Pedestal* with its Ornaments, must be one third part of the Column with its *Basis* and *Capital*: even as in the Ornaments above, the *Architrave*, *Frieze* and *Cornice* must make one fourth part of the same. This being well understood, will prove very profitable and delightfull unto your labour; for being to make any of the five Orders, you must divide the height of the Column with its Ornaments into 19 parts, then take the height of the Column with its *Basis* and *Capital*, and make the divisions of the *Models* according to its Order, *Dorick*, *Ionick*, &c. then you must frame the *Fabrick* with this *Model*, dividing its parts as may be seen in the Figure: where A represents the Body of the Column, B the nether *Band* or *Swathe* of the Column, C the *Torus*, D the *Plinthus*, E the *List*, (a generall name used in all members alike, whether less or more,) F the *Gula* or *throat*, reversed in the *Pedestal*.

TUSCAN ORDER. 23



V.

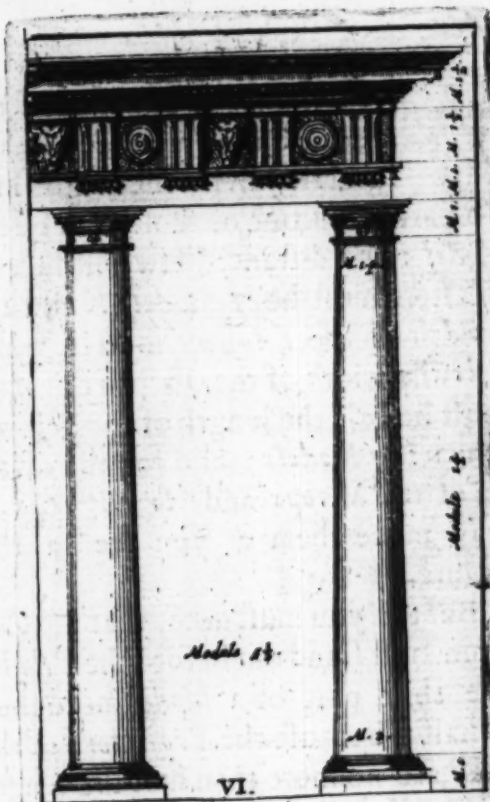
HAVING heretofore described in general the chiefest Dimensions to make the *Tuscan* Order by; and having here and in the fore-going leaf set down the parts at large, to the end you may see in the particulars the division of every small member, and also the Draughts (though the Draughts with the Members alone might be sufficiently understood of any ingenious capacity without any Comment upon them) yet for the more easie instructing of all Lovers of Art, I shall also give you the meaning of some generall Terms used in Art; as for Example, the Member marked with A in this Figure, is called the *Ovolo*, or the Egg, B the *Tondino*, or round, C the *List* or *Rule*, D the *Crown*, E the *List*, F the *Gula* or Throat reversed, G the *Frieze*, H the *List* of the *Architrave*, I the *Architrave*, K the *List* of the *Abacus*, L the *Abacus* or *Cimatium*, M the *Ovolo*, N the *List*, O the *Frieze* of the *Capital*, P the *Neck* of the *Column*, Q the hanging over of the *Capital*, R the *Body* of the *Column*.



VI.

TO make the *Dorick* Order without a *Pedestal*, you must divide the whole height into 20 parts, and one of those parts shall be the *Model*; which *Model* you must divide into 12 parts, as in the *Tuscan* Order; The Foot or Basis, with the nethermost Swathe or Band, shall be of one *Model*; the height of the Column between the Base and Capital, shall be 14 *Models*; the Capital 1 *Model*, which added together, make 16 *Models*, for the height of the Column, with Base and Capital: Then (as I told you before in the *Tuscan* Order) the *Architrave*, *Frieze* and *Cornice*, must be one fourth part of the Column with its Base and Capital, as you may see in the Figure: where the *Architrave* is 1 *Model*, the *Frieze* 1 and a half, and the *Cornice* 1 and an half, which added together, make 4 *Models*, for the height of the *Architrave*, *Frieze* and *Cornice*, which is one quarter of 16. the height of the Column with its Base and Capital. And if you add the 4 *Models* for the *Architrave*, *Frieze* and *Cornice* to 16, there will arise 20 *Models*, for the height of the Column with its Base and Capital; which is the whole height, as aforesaid.

DORICK ORDER. 27



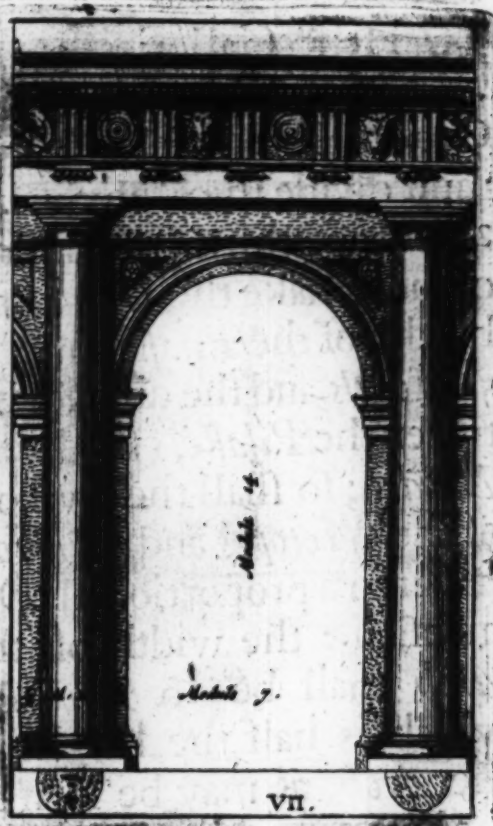
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VII.

WHen you make *Galleries* of the *Dorick* Order, you must (as aforesaid) divide the height into 20 parts, and one of those shall be the *Model*: the distance between the two *Pilasters* must be 7 *Models*, and the bredth of the *Pilasters* must be 3 *Models*; the width of the *Overture* or *Arch* must be half the length of the *Column*, which is 7 *Models*; and for the division of the *Metops* and *Trygliphs*, you may make them as you see in this Figure.

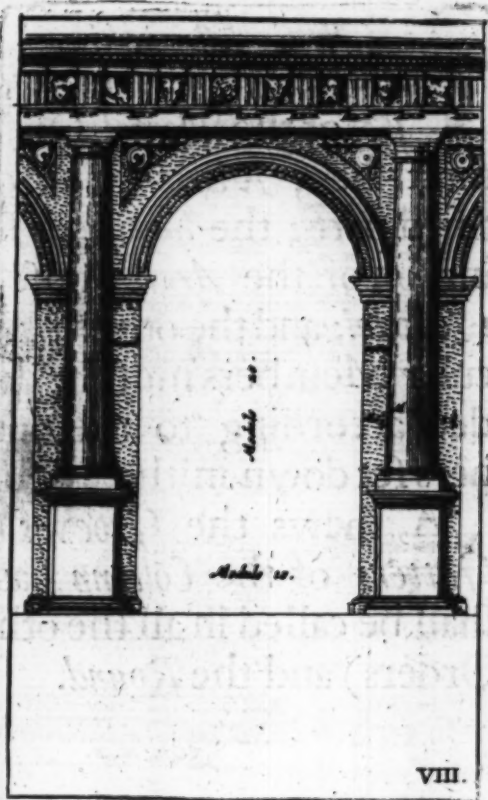
But this you must note, that the *Column* must stand out before the *Pilaster* one third part of a *Model* more then its half; because the *Projectors* of the *Arch* are no more then half the length of the *Column*. And this you may observe for a Rule in all the other Orders upon the like occasion.

DORICK ORDER. 29



WHen Galleries are to be made after the *Dorick* Order, with *Pedestals*, you must divide the Column into 25 and one third part; and one of these make the *Model*: the breadth of the *Pilaster* shall be 5 *Models*, and the distance between the *Pilasters* shall be 10 *Models*; so shall the divisions of the *Metopes* and *Triglyphs* fall into a proportionall Dimension: the width of the *Arch* shall be 10 *Models*; which is half the height of the *Arch*, as may be seen in the Figure.

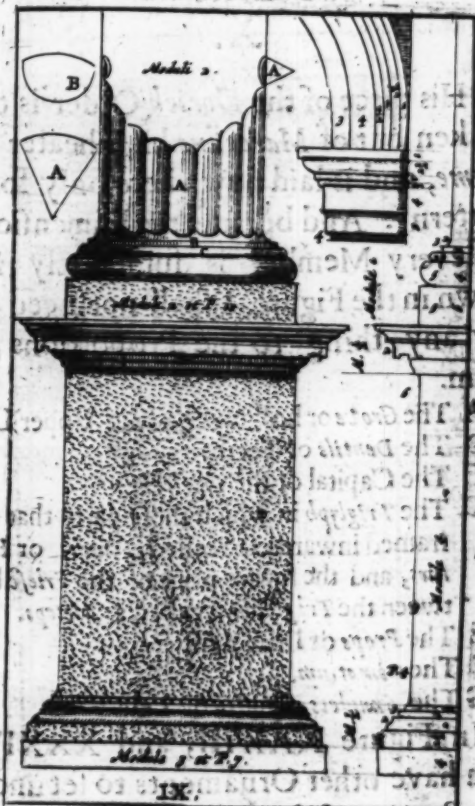
DORICK ORDER. 31



THe height of the *Pedestal* of the *Dorick* Order, must be 5 *Models* and one third part; the *Impost*, or setting on of the *Arch*, must be 1 *Model*: and the other particular Members must be divided according to the numbers set down in the Figure.

A, shews the *Grooves* or *Gutters* of the *Column* (as it shall be called in all the other Orders) and the *Round*.

DORICK ORDER. 33



X.

THis piece of the *Dorick* Order is taken out of *Marcellus* his Theater in *Rome*, and is laid down here only for a Pattern : And because the Dimensions of every Member is sufficiently set down in the Figure, I shall not need to say any thing to the Proportions of them.

A The *Groove* or hollowing of the Upper List.

B The *Dentils* or Teeth.

C The Capital of the *Triglyph*.

D The *Triglyph* in which those parts that are framed inwards are called *Flutes*; or *Hollows*, and the square place of the *Frieze* between the *Triglyphs* is called a *Metop*.

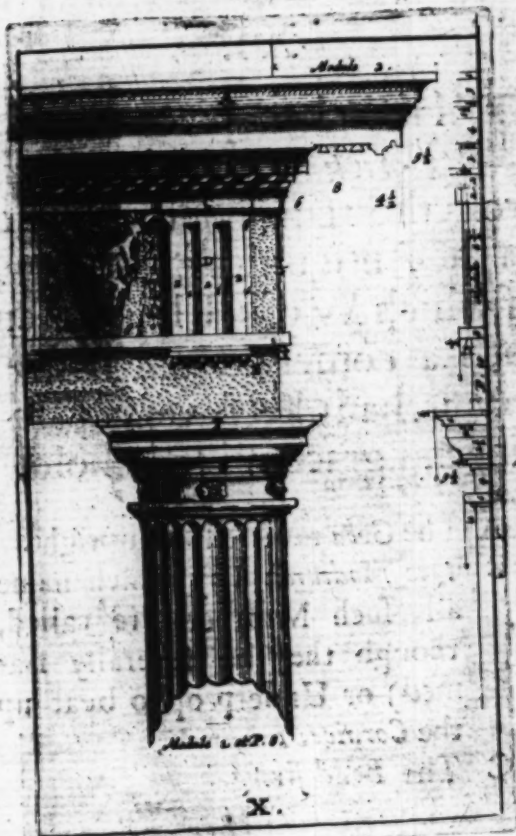
E The *Props* or little Bells.

F The *Cimatium*.

G The *Annulets*, Bands, or Lists.

In Figure XXXIII, and XXXIV, you have other Ornaments to set under the *Cornice* of the *Dorick* Order.

DORICK ORDER. 35



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XI.

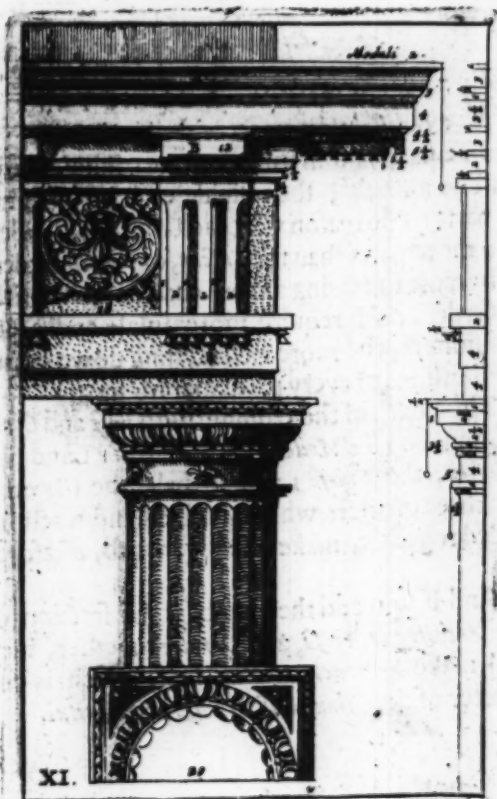
THis other piece of the *Dorick* Order is taken from the remainder of some of the Antiquities of R O M E; of which Work I have seen such a comely Composure, that it hath been very pleasant and gracefull to behold.

A The *Gola* reversed, or upright.

B The *Modillion* (by which name all such Members are called, though they be severally framed) or Underprop to bear up the *Cornice*.

C The *Bead string*.

DORICK ORDER. 37



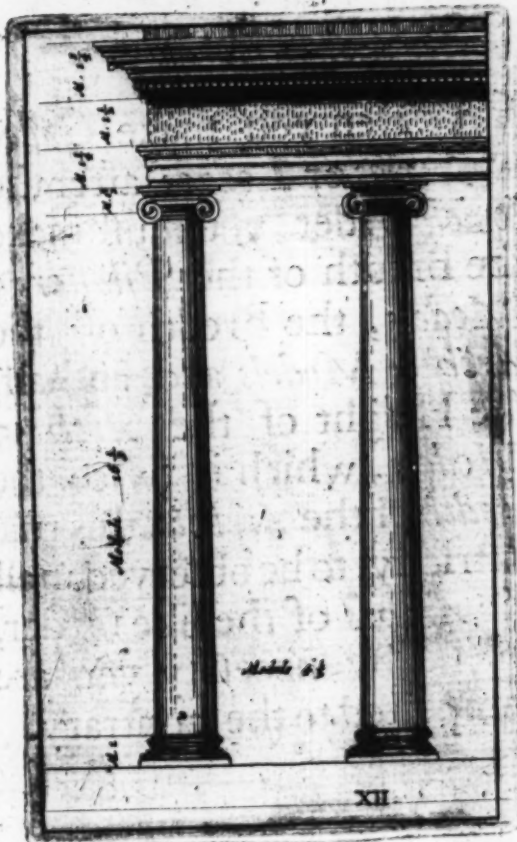
XII.

WHen you make the *Jonick* Order without a *Pedestal*, you must divide its whole height into 22 parts and an half, and one of those parts shall be a *Model*; then divide each *Model* into 18 parts: The reason why each *Model* is divided into more parts than the *Tuscan*, or *Dorick* Order, is, because this being a more curious and spritely Order, doth require more small and acute divisions for the more exact setting down of the Dimensions of every particular Member.

The length of the Column with *Base* and *Capital*, must be 18 *Models*, the *Architrave* 1 and one quarter, the *Frieze* 1 and an half, the *Cornice* 1 and three quarters; which numbers and fractions added together, make 22 and an half, as afore-said.

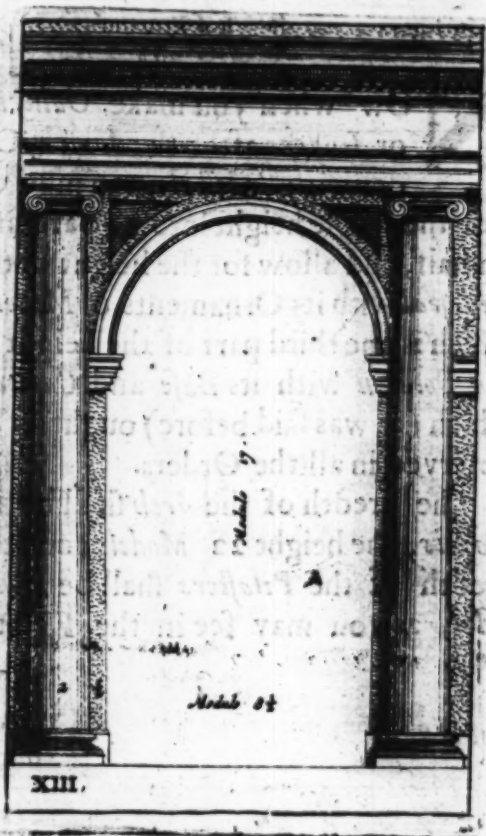
And if you add the numbers and fractions of the *Architrave*, *Frieze*, and *Cornice* together, they will make 4 *Models* and an half, which is one quarter of the Column with *Base* and *Capital*.

IONICK ORDER. 39



WHen you make *Galleries* or *Lodges* after the *Ionick* Order, you must make the Breadth of the *Pilasters* 3 *Models*, the Breadth of the *Arch* 8 *Models* and an half, the Height of the *Arch* 17 *Models*, which is twice the breadth of the *Arch*: & this rule is strictly to be observed in all the *Arches* of the like Order, unlesse by necessity you are compelled to the contrary.

IONICK ORDER. 41

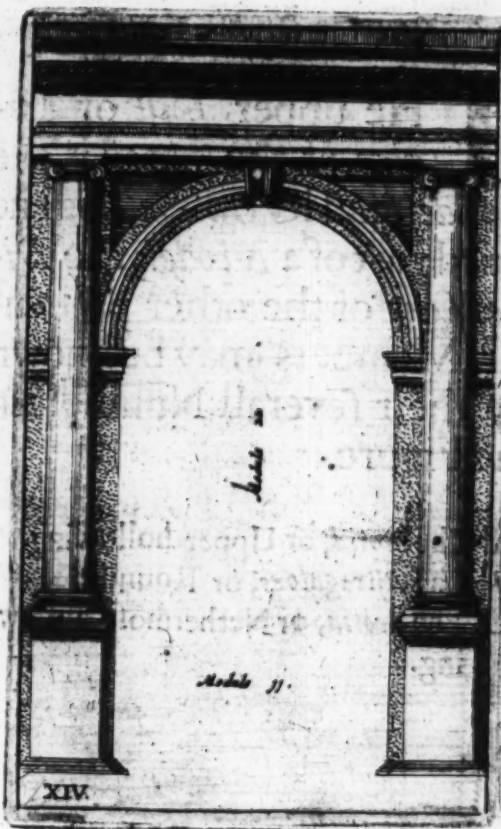


XIV.

NOW when you make *Galleries* or *Lodges* after the *Ionick* Order with *Pedestals*, you must divide the whole height into 28 parts and an half, and allow for the height of the *Pedestal* with its *Ornaments* 6 *Models*, which is one third part of the height of the *Column* with its *Base* and *Capital*, which (as was said before) ought to be observed in all the Orders.

The bredth of the *Arch* shall be 11 *Models*, the height 22 *Models*, and the bredth of the *Pilasters* shall be 4 *Models*; as you may see in the Figure.

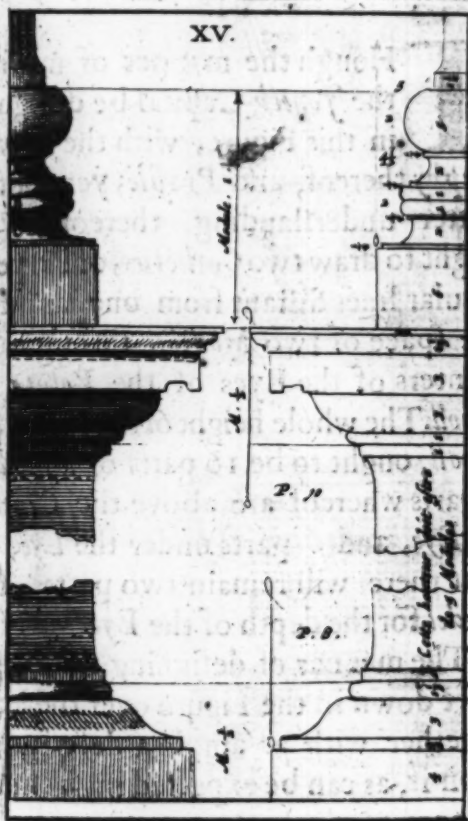
IONICK ORDER. 43



THe upper *List* or *Cor-nice* of the *Impost* is one *Model*, and its *Out-jetting* one third part of a *Model*; the *Dimensions* of the other particular Members may be known by their severall Numbers in the Figure.

- A The *Scotia*, or Upper-hollowing.
- B The *Astragales*, or Rounds.
- C The *Scotia*, or Nethermost-hollowing.

JONICK ORDER. 45



THough the manner of making the *Jonick Capital* be designed in this Figure, with the *Ichthyography* thereof, and *Profile*; yet for the better understanding thereof, you ought to draw two *Cathetus*, or Perpendicular lines distant from one another the space of two *Models*, through the Centers of the Eyes of the *Voluta* or *Scroll*. The whole height of the *Voluta*, or *Scroll*, ought to be 16 parts of a *Model*, 8 parts whereof are above the *Center*, or *Eye*, and 6 parts under the *Eye*, so that there will remain two parts of a *Model* for the depth of the *Eye*.

The manner of designing this *Scroll* is set down in the Figure over the leaf, together with as ample a description upon it, as can be expected in so small a Room.

48 *A Description of the*

XVII.

The manner of making the Voluta or Scroll.

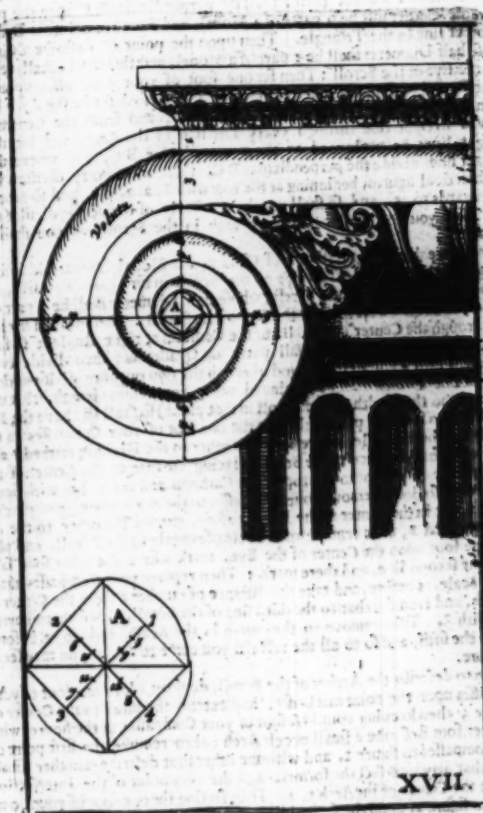
First, Draw a Cathetus, whose length must be 16 parts of a Model, and upon the 7th. part upwards, make the Center of the eye of the Scroll, and upon that Center describe a Circle, whose half Diameter shall be one part, and that Circle shall be the eye of the Scroll; then through the Center of the Eye draw a straight line, that shall both cut the Cathetus at right Angles, and divide the Circle into 4 equall parts; then from the points of Intersection of the straight lines with the Circle, describe a Square within the Eye, and every side of this Square divide into two equall parts, and from each Division to its Opposite, draw straight lines; then divide each of these lines from the Center into 2 equal parts, and with figures mark every point of Division (as in the Draft) with 1, 2, 3, &c. and from this ground-work you may with great ease describe the whole Scroll, as followeth.

First place one foot of your Compasses upon the side of the Square, at the point 1, and extend the other to the top of the Cathetus, and from thence describe a Quadrant, which will reach from the top of the Cathetus aforesaid, to the straight line that is perpendicular to the Cathetus: then remove the one foot of your Compasses to figure 2, and bring the other foot to the ending of the former Quadrant, and from thence describe another Quadrant, which shall end at the bottom of the Cathetus: then move your Compasses again, and place one foot at figure 3, and the other foot where the second Quadrant ended, and from thence describe another Quadrant: then move your Compasses to figure 4, and where your last Quadrant ended, describe another; then move one foot of your Compasses into the point of Division marked with Figure 5, and fix the other foot to the place where your last Quadrant ended, and from thence describe another Quadrant; from thence move to 6, and describe another Quadrant; then to 7; then to 8, &c.

To make the thickness of the List of the Scroll.

The thickness of the List must be one quarter of the space of the shortest distance between the two edges in the Scroll; therefore when you draw a List about it, you must divide the space between every one of the 12 Centers, into 4 equall parts, and place one foot of your Compasses upon the division that falls next to the Centre of that Arch whose List you mean to draw, and with the other foot you may describe the Arch that shall be the bounds of the List of the Scroll in that place. Do the like in all the rest, and your Scroll, and List about it will be finished.

IONICK ORDER. 49



XVII

50 *A Description of the*

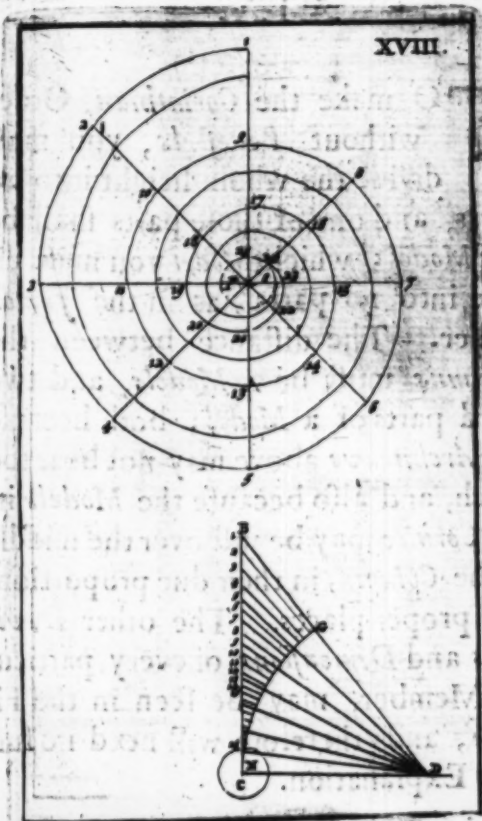
XVIII. *A Second way to make the Voluta.*

Describe the Triangle BCD after this manner. Let the side CD be 7 parts of a Model, then let fall the perpendicular BC upon the point C, whose length must be 9 parts of a Model, and from the points B D, draw the other line in the Triangle. Then upon the point C, describe a Circle, whose half Diameter shall be 1 part of a Model, and this Circle shall represent the Eye of the Scroll: Then set one foot of your Compasses upon the point D, and extend the other to the point C, and so describe the Arch EF: Then divide that Arch EF into 24 equal parts, and from the Centre D, draw a straight line through every Division of the Arch, and let those straight lines be prolonged to the perpendicular BC, and where those straight lines divide the perpendicular BC, there mark every division with Arithmetical figures, beginning at the top with 1, 2, 3, &c. and so proceed downwards to 24, and so shall you have a Scale of the perpendicular that will give you the Center of every arch in the Scroll, as you shall see hereafter.

Therefore draw your Cathetus of 16 parts of a Model (as was said before) and place your Center of the eye of the Scroll upon 7 parts upwards, and upon that Center describe a Circle, whose half Diameter shall be 1 part of a Model, and this Circle shall be the Eye of the Scroll: Then draw a straight line through the Center that shall cut the Cathetus at right Angles; so have you the Eye divided into 4 equal parts or Quadrants; then divide every Quadrant into 2 equal parts, and through the two opposite divisions draw straight lines (which must be continued out to a convenient length, that will comprehend the breadth of the Scroll in that place) so shall you have the Eye divided into 8 equal parts; then set the one foot of your Compasses in the point C of the Triangle, and extend the other to the Division marked 1, and so transfer that distance to the Scroll, placing one foot at the Center of the Eye, and the other foot to the top of the Cathetus, and mark that with figure 1; having so done, remove your Compasses to the Scale again, and placing the one foot in the Center of the Eye, as afore, extend the other to the division marked 2, then remove your Compasses again to the Scroll, and placing one foot upon the Center of the Eye, mark where the other foot falls upon the second line, and there mark 1: Then remove your Compasses again to the Scale, as before, and take the distance of number 3 from the Center of the Eye, and transfer that to the third line of the Scroll, as before, and mark that with 3. Then remove to the fourth in the Scale, and do as before, then to the fifth, and so to all the rest till you come to 24, as you may see in the figure.

Then to describe the Arches of the Scroll, do thus: Place one foot of your Compasses upon the point marked 1, and extend the other to the Center of the Eye; then keeping your first foot of your Compasses at the figure; with the other foot describe a small occult Arch; then remove the first point of your Compasses to figure 1, and with the other foot describe another small Arch, that may intersect the former, and the very point of the Intersection shall be the Center of the Arch 1, 2. Then setting the one foot of your Compasses to figure 2, upon the second line of the Scroll, extend the other to the Center of the Eye, and your Compasses being at that distance, describe another small Arch through the Center of the Eye of the Scroll: Then remove the first foot of your Compasses to the point 3, upon the third line, and with the second foot describe another small Arch, that shall cut the former Arch, and the very point of Intersection shall be the Center of the Arch 2, 3, as you may see in the Figure. Do the like with all the other Figures, till the whole Scroll is finished.

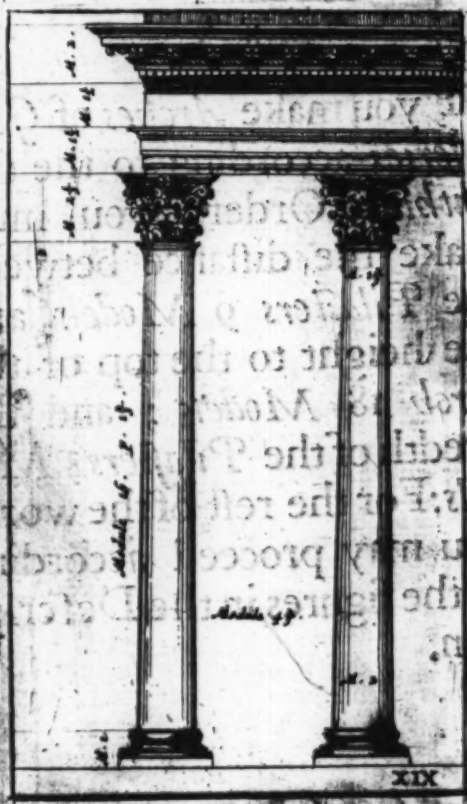
IONICK ORDER. 51



XIX.

TO make the *Corinthian* Order without *Pedestals*, you must divide the whole height into 25 parts, and one of those parts shall be the *Model*; which *Model* you must divide into 18 parts, as in the *Jonick* Order. The distance between the *Columns* must be 4 *Models*, and two third parts of a *Model*; both because the *Architrave* above may not bear too much, and also because the *Models* in the *Cornice* may be just over the middle of the *Column*, in their due proportions and proper places. The other *Divisions* and *Dimensions* of every particular Member, may be seen in the Figure, and therefore will need no further Explanation.

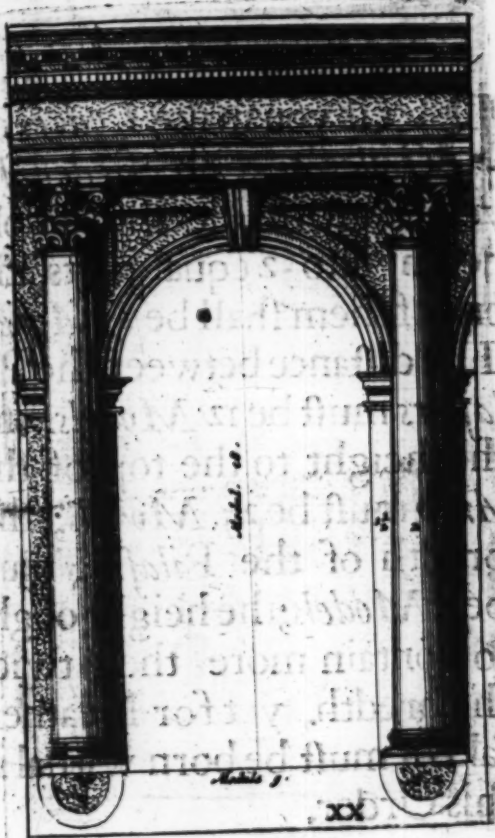
CORINTHIAN ORDER 53



XX.

IF you make *Arches* of *Galleries* according to the *Corinthian* Order, you must make the distance between the *Pilasters* 9 *Models*, and the height to the top of the *Arch* 18 *Models*; and the breadth of the *Pilasters* 3 *Models*: For the rest of the work, you may proceed according to the figures in the *Description*.

CORINTHIAN ORDER.



XXI.

BVt if you make *Lodges* or *Galleries* with *Pedestals*, you must divide the whole height into 32 equal parts, and one of them shall be a *Model*: The distance between the *Pilasters* must be 12 *Models*, and the height to the top of the *Arch* must be 25 *Models*; the bredth of the *Pilasters* must be 4 *Models*; the height ought to contain more then twice the bredth, yet for *Neatness* sake it must be born withal in this Order,

CORINTHIAN ORDER. 57



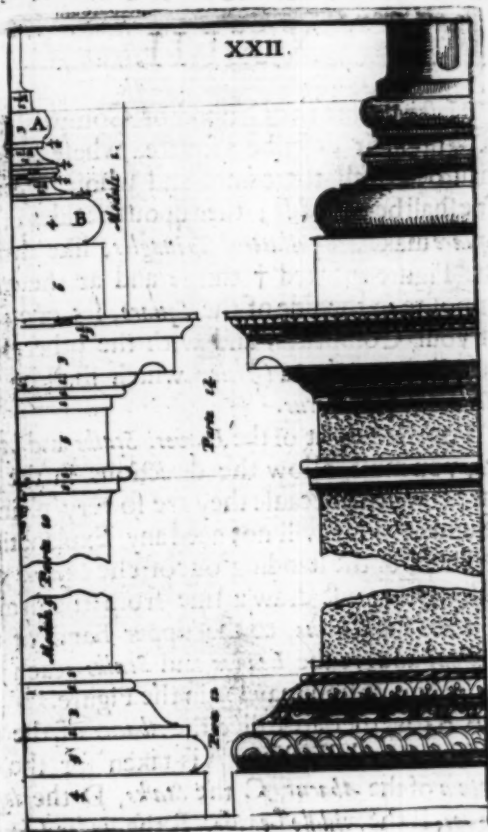
X XII.

IF the *Pedestal* of this *Corinthian* Order were the third part of the *Column*; it should be 6 Models, and two third parts of a Model; but for the greater strength, it may be made of 7 Models; which in this Order will not do amiss; and also, because the meer *Pedestal* without the *Cimatia* and *Base*, may be twice the length of its breadth.

A The upper *Torus*, or *Swathe*.

B The nether *Torus*, or *Swathe*.

CORINTHIAN ORDER. 59



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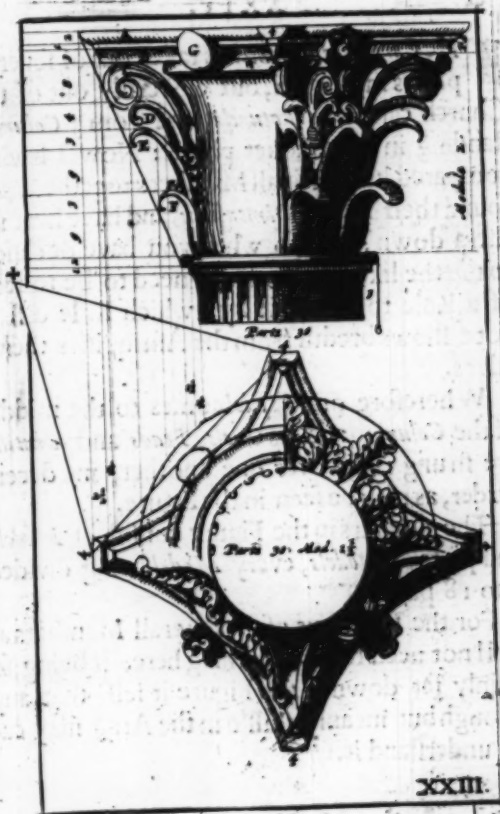
First measure the Ground or Compass, and upon it describe a square, whose 4 sides shall be equall thereunto, and whose *Diagonal* line shall be 4 *Models* ; then upon the sides of the *Square* make 4 *Equilateral Triangles*, like that in the Figure marked † thus ; and at the *Angle* opposite to the side of the *Square*, set one foot of your *Compasses*, and with the other foot describe an *Arch* of a *Circle*, which shall be the *Hollow* of the *Abacus*.

For the height of the *Leaves*, *Stalks* and *Abacus*, you must follow the directions in the Figure ; which because they are so very plain to be understood, will not need any *Explanation*.

Then for the standing out of the *Leaves* and *Stalks*, you must draw a line from the utmost point of the *Abacus*, to the upper Band of the *Column*, and let the *Leaves* and *Stalks* reach just to the line, as you may see in the Figure.

A B together are called the *Abacus* of the *Capital*, but for distinction, A is taken for the *Cymatium* of the *Abacus*, C the *Stalks*, D the *lesser Leaves*, E the *middle Leaves*, F the *under Leaves*, G the *Flower*.

CORINTHIAN ORDER. 61



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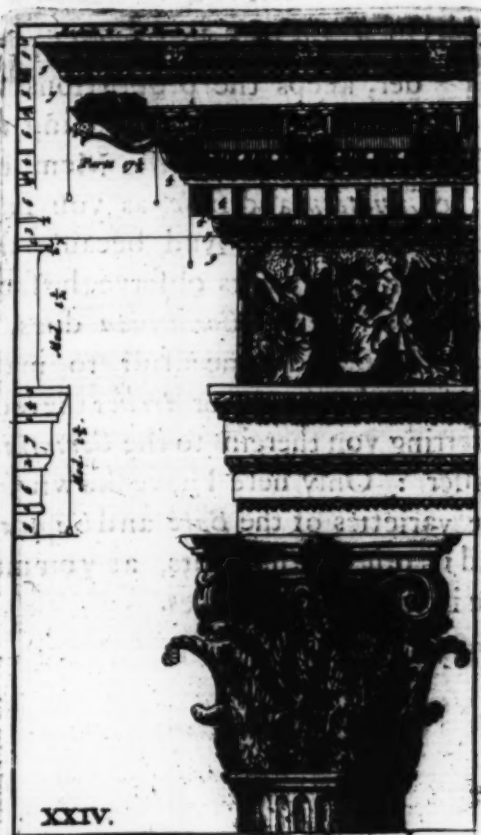
THe *Corinthian Cornice* is taken out of severall places in R o m e, but especially out of the Church called *La Rotunda*, and from 3 *Columns* standing in the Market place : Now I having compared its principall Members together, have found their severall *Dimensions*, and have here set them down ; that so when you have occasion to use the like, you shall not need to be to seek of a Rule to worke it by, which Rule differs not a straws bredth from the Antiquities themselves.

Wherefore one *Model* comes to the middle of the *Column*, and its *Ovals*, *Beads* and *Dentils*, are strung right over one another, in a decent Order, as may be seen in the Figure.

The numbers in the Figure consist of *Models*, and parts of *Models*, every *Model* being divided into 18 parts.

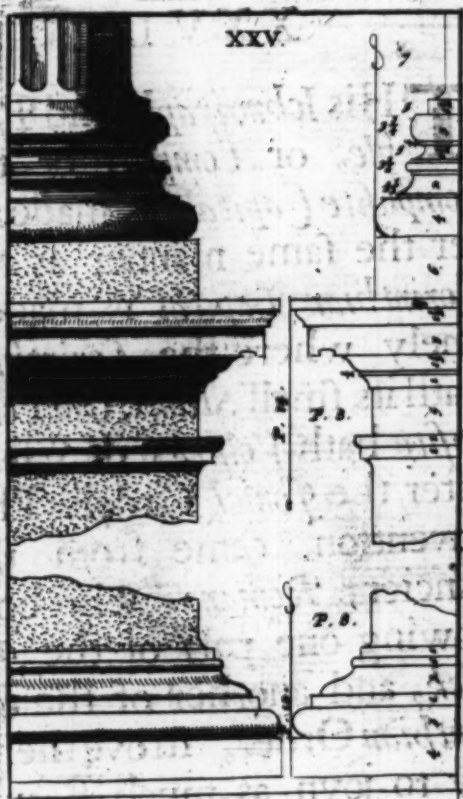
For the Divisions of the severall Members, I shall not need to say any thing here, it being so plainly set down in the Figure it self, that any (though but meanly skill'd in the Art,) may easily understand it.

CORINTHIAN ORDER. 63



THis *Pedestal* of the *Composite* Order, keeps the proportions of the *Corinthian*, there being no other difference but in the Members of the *Cimatium* and *Base*, as you may see in the Figure. And because the *Composite* Ornaments observe the same proportion as the *Corinthian* does, I have not judg'd it needfull to make any severall *Columns* or *Arches* thereof, referring you therein to the *Corinthian* Order : Only here I have shown you the varieties of the *Base* and *Capital*, and its other Ornaments, as you may see in their proper places.

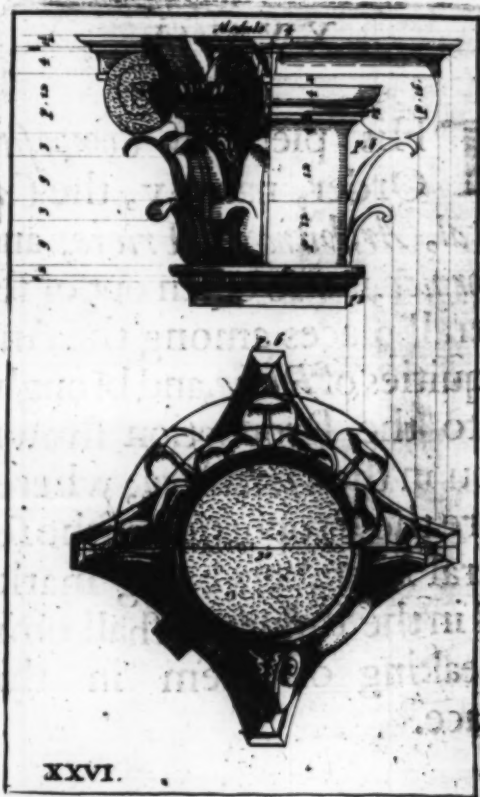
COMPOSITE ORDER. 85



XXVI.

THis *Ichnography* and *Profile*, or *Compass* of the *Composite Capital*, is made after the same manner as the *Corinthian Capital* is made: onely where the *Corinthian* hath its *finall Stalks*, the *Composite* hath *Voluta's*, or *Scrolls*, after the *Ionic Order*. This *Invention* came from the *Ancient Romans*, who borrowing one part of the *Ionic*, and another of the *Corinthian Order*, strove thereby to joyn as much *Beauty* and *Bravery* as they could together.

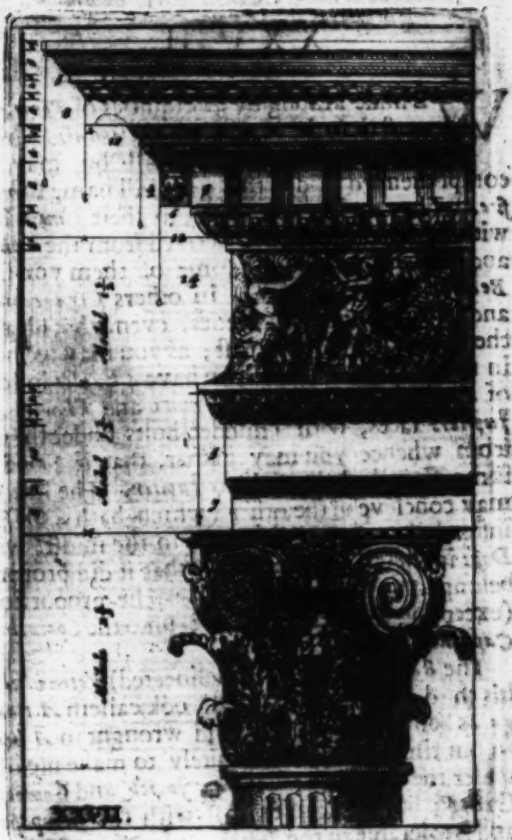
COMPOSITE ORDER. 67



XXVII.

THis piece of *Composite* Order, namely, the *Capital*, *Architrave*, *Frieze*, and *Cornice*, is also taken out of severall places among the Antiquities of *Rome*, and brought into the Proportion shown you in the *Corinthian*; wherefore the Proportion of the several Members being marked in the Figure, I shall omit speaking of them in this place.

COMPOSITE ORDER. 69



XXVIII.

WE finde among the Antiquities of *Rome*, almost infinite varieties of *Capitals*, which have no proper name at all, but may be comprehended under this generall name *Composite*. They do likewise agree in their *Dimensions* with the other *Composites*, derived from the *Ionick* and *Corinthian*; only in some of them you find *Beasts* instead of *Stalks*: in others *Cornucopia's*, and in others other varieties, even what pleased the Fancy of the Artist best; as you may see here in this *Designe*: where you have 4 *Eagles* instead of *Stalks*, and instead of *Fruits* and *Flowers*, 4 *Jupiters* faces, with *Thunder-bolts* under them; from whence you may gather, that it stood in some *Temple* dedicated to *Jupiter*. The like we may conceive of the other (which hath 4 *Griffins* instead of *Stalks*, and 4 *Eagles* in the midst, with *Dogs* in their *Tailons* or *Claws*), that it did properly belong to some of their *Idols*. The proportions (excepting the *Beasts*) is like unto the *Corinthian Capitals*.

The *Base* (which is last delineated) *Vetruvius* in his third chapter of his third Book calleth *Atticæ*, as being first invented and wrought in *Athen*. In our times we use indefinitely to make use of it under the *Dorick*, *Corinthian*, *Ionick* and *Composite* Order; but it agreeth best with the *Composite*, and is tolerable in the *Ionick*;

COMPOSITE ORDER. 71



XXIX.

There are divers ways to lessen Columns, whereof I have here and in the following page set down those two which are most esteemed of.

The first and best is this. After you know the height and thickness of the Column, you must divide the Cathetus thereof into 3 equal parts, and in the point of the first division upwards, draw a thwart line through the Column, that shall cut the Cathetus at right Angles, then in the point of Interfection, set one foot of your Compasses, and extend the other foot to one of the sides of the Column, or to half the breadth, which is all one, and so describe a Semi-circle upon the thwart line, then divide half that Semi-circle into so many parts as you please, as into 6, 9, 12, 15, or more, and note that into so many parts as you divide the Semi-circle, so many equall parts you must divide the two upper thirds of the Cathetus into, and upon every Division draw straight Lines through the Column, that shall cut the Cathetus at right Angles; then from every point of Division in the Semicircle, draw straight Lines parallel to the Cathetus, and where these straight lines intersect the Lines drawn athwart the Column, there shall be the severall points that you must lessen the Column into in every particular place. But you must take notice, that the Line drawn from the first point of Division in the Sem circle, must intersect the line drawn from the first Division in the Cathetus; and the second in the Semicircle, the line drawn from the second in the Cathetus; the third in the Semi-circle, from the third in the Cathetus, and so forth; every line drawn from the severall points of Division in the Semicircle, must intersect the line drawn from the same number of Divisions in the Cathetus.

Having thus drawn one side of the Column, you may by the same Rules draw the other side also, or else measuring with your Compasses the distance of every point of lessening from the Cathetus, you need but turn your Compasses about upon the point that stands in the Cathetus, and so transfer the distance to the other side of the Column.

This kind of lessening may be used in the Tuscan and Dorick Order, which Orders are not to be lessened below the nethermost third part of the Column.

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XXIX

XXX.

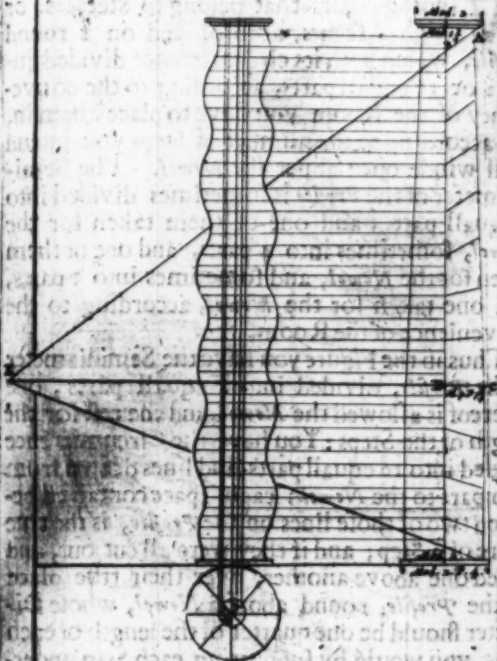
Another way to lessen Columns.

THis second way of lessening Columns, our Author found out by his own study and Invention, and though it be not very common, yet it is easie enough to be understood by the Figure: Wherefore in the first place, you must divide the whole Cathetus into 3 equal parts, and through the first point of Division (counting upwards) you must draw a thwart line, as C D that shall cut the Cathetus at right Angles, which line must be continued to a convenient length, as to E. that so it may be intersected by the lines drawn from the divisions in the Cathetus, as you shall learn hereafter: then divide each of them three equal parts into four equal parts more, and if you intend to have your Column wreathed, divide every one of those four parts into four equal parts more: so shall your Cathetus be divided into 48 equal parts: Then with your Compasses men are the length of the line C D, and carry that length to the top of the Column, placing one foot of your Compasses in the point A, and noting where the other foot falls upon the Cathetus, as in the point B, and through these two points draw a straight line, and continue it till it intersect the line C D E, as here it doth in the point F: Then from the point E draw straight lines through every fourth Division in the Cathetus, as in the Figure, or if you desire (for more exactness) through every single division in the Cathetus, and continue them to the outside of the Column: Then keeping your Compasses to their former distance, place one foot upon the point of Intersection of every one of the slope lines with the Cathetus, and extend the other towards the outside of the Column upon the same slope line; and where the other foot of your Compasses falls, there shall be the point of the Column lessening in that place. And note that though the former Column was lessened but from one third part upwards, yet this which serves for other Orders, viz. for the Jonick, Corinthian and Composite orders, must be lessened from the first third part both upwards and downwards, as you may see in the Figure; and therefore you must as well draw slope lines through the Divisions in the nether part of the Cathetus, as through the upper.

Having thus divided and wrought upon the Column, if you will have your Columns wreathed (as those of St. Peters Church at Rome) you must draw straight lines through every one of the 48 divisions in the Cathetus to the outside of the Column, which straight lines must be Parallel to the line C D E; then on the Plot or Ground-work, upon the Cathetus, describe a small Circle, and divide it into 3 equal parts, and draw lines through the opposite points of divisions; and upon the same Center that you drew this Circle, describe another smaller Circle within the former, which by the Lines drawn through the Center, will also be divided into the same parts: then the greater Circle is: Then from the points of Division in the small Circle, draw 4 lines through the Column parallel to the Cathetus, and where those lines intersect the thwart line drawn before, there shall be the several points, through which you must carry on a Spiral line along by the Cathetus, as in the figure. But you must note, that at the four first lines at the bottom and top of the Column, the spiral line must not touch the common Parallel line, but must run as you see in the Figure. Then on the Cathetus must you measure the thickness of the straight Column in every Division, and transfer that thickness to the same Division in the wreathed Column, placing one foot of your Compasses at the intersection of the spiral line with the divisions of the Cathetus, and the lines parallel to the Cathetus, and extending the other to the sides of the wreathed Column; and where the other foot of your Compasses falls, there shall be the bounds of the sides of the wreathed Column in that place.

Note, that if you make the little inner Circle bigger, then will the Column be more wreathed; if less, then will the Column be less wreathed.

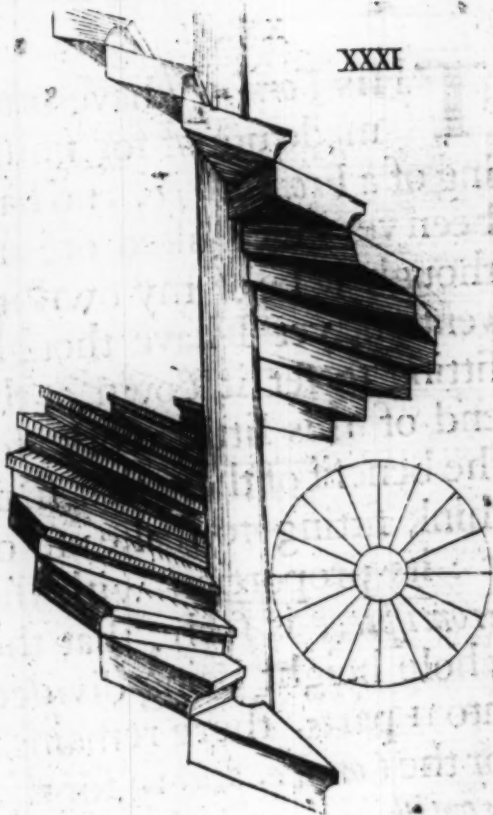
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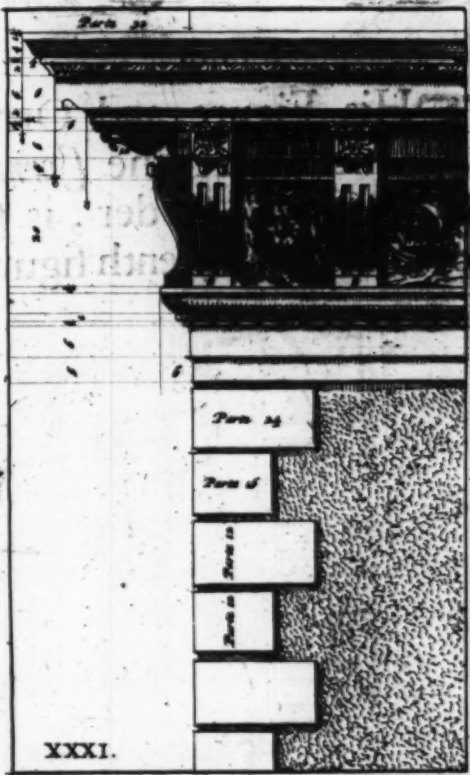
XXXI.

Winding Stairs that belong to Steeples, or high Ascents, are projected on a round *Profile*, which hath its circumference divided into 12 or 16 equall parts, according to the conveniency of the Room you have to place them in, and according to the number of Steps you intend shall winde once about the *Newel*. The Semi-Diameter of the *Profile* is sometimes divided into 6 equall parts, and one of them taken for the *Newel*, sometimes into 4 parts, and one of them taken for the *Newel*, and sometimes into 3 parts, and one taken for the *Newel*, according to the convenience of the Room, &c.

Thus in the Figure you have the Semidiameter of the *Profile*, divided into 4 equall parts, one whereof is allowed the *Newel*, and the rest for the length of the Steps: You have the Circumference divided into 16 equall parts, and lines drawn from each part to the *Newel*; each space contained between two of those lines on the *Profile*, is the true figure of a Step; and if they were all cut out, and placed one above another, over their true place on the *Profile*, round about a *Newel*, whose Diameter should be one quarter of the length of each Step; you would by supporting each Step underneath, already have the *Model* of a true pair of Stairs, as they are laid down in the Figure,



THis *Cornice* I have often made use of for finishing of a *Frontispiece*, and hath been very well liked of: and though it be of my own invention, yet I have thought fitting to set it down at the end of this little work, for the benefit of them that shall think fitting to make use of it: its proportion with the *Frontispiece* is such, that the whole height being divided into 11 parts, there remains 1 for the *Cornice*, and 10 for the *Frontispiece*, and the rest is plain enough to be seen in the Figure.

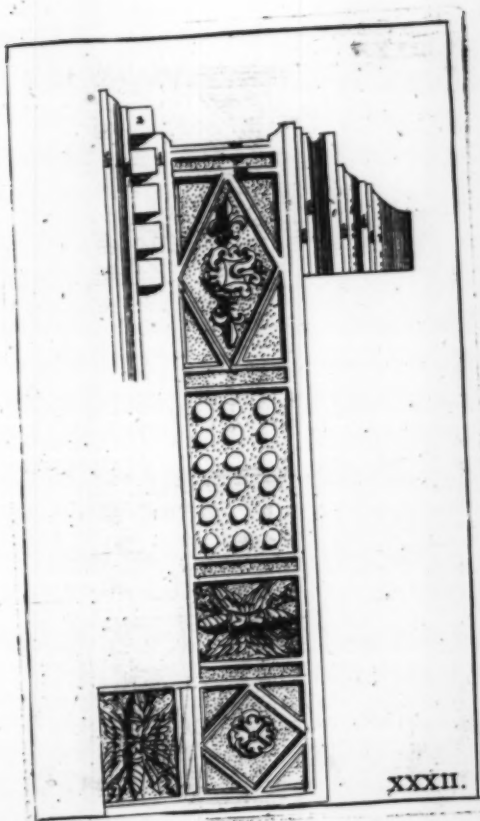


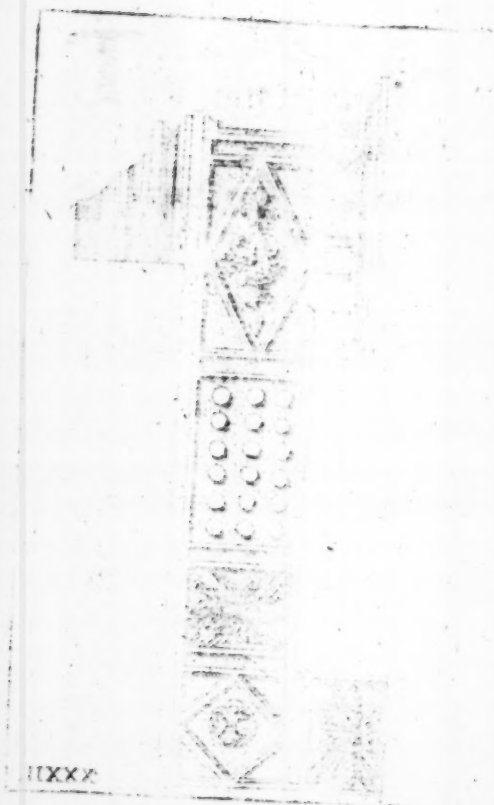
XXXI.

XXXIII.

THis Figure and Ornament under the *Cornice* of the *Dorick* Order, is set down also in the tenth figure.

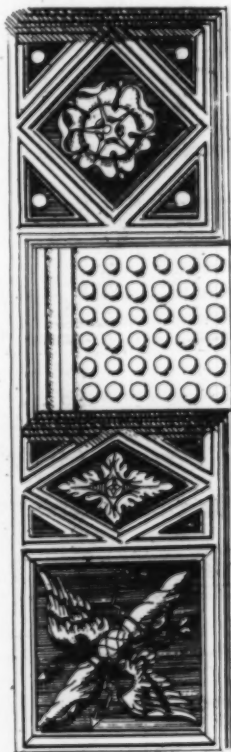
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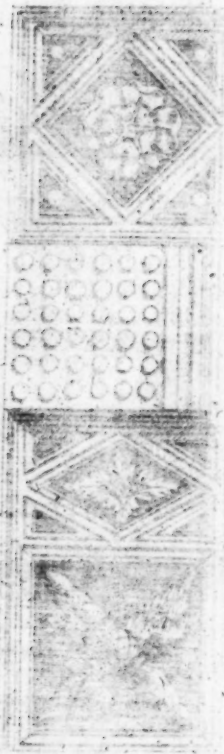


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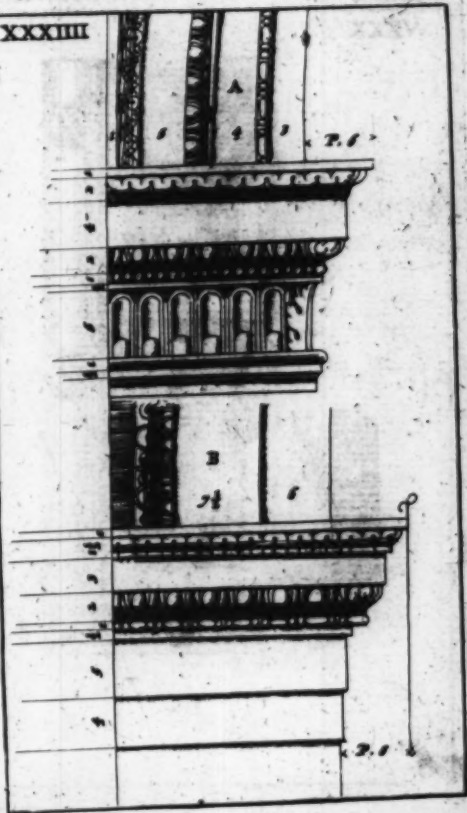
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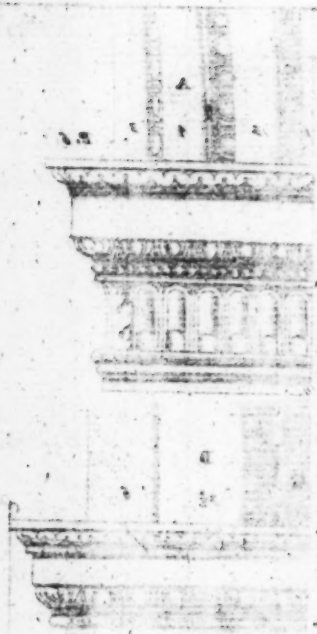
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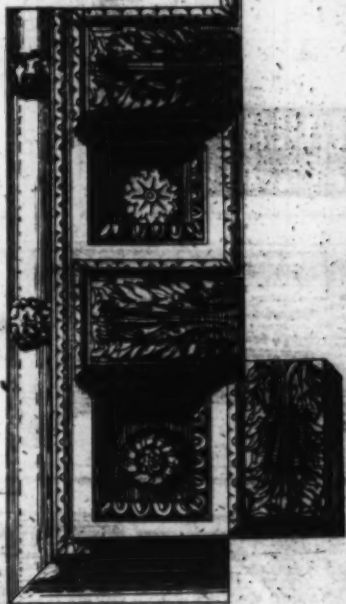
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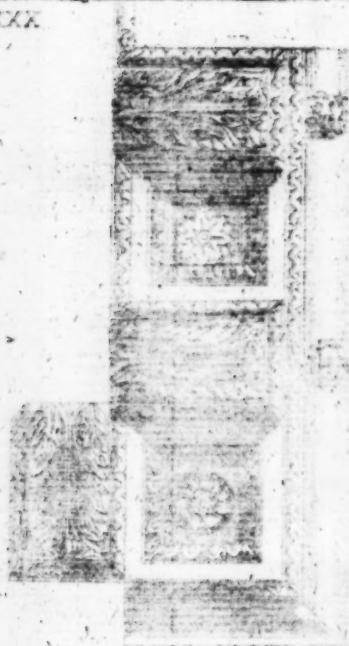
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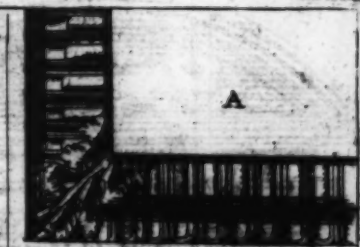
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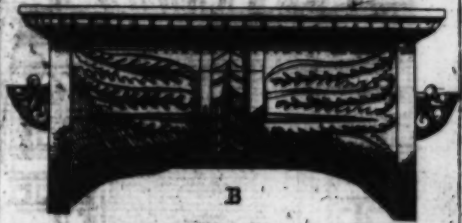
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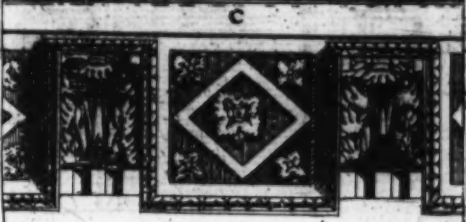
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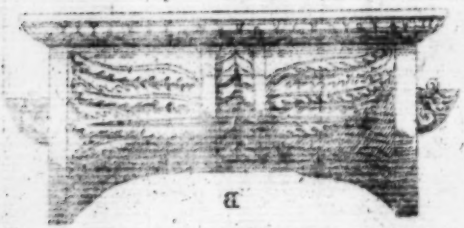
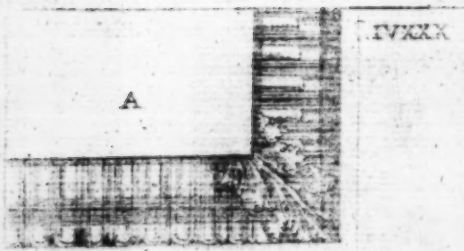
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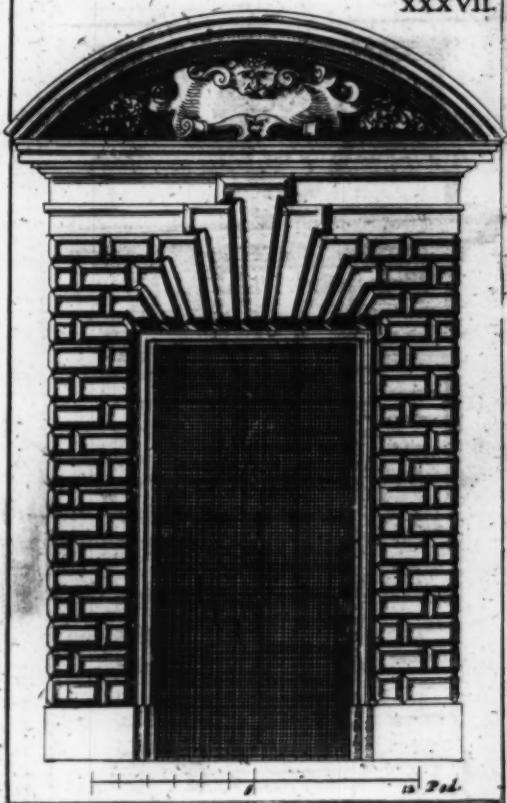
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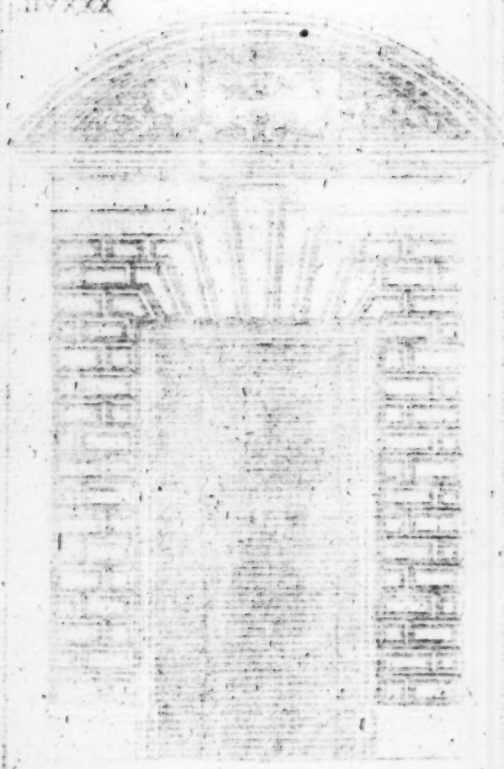
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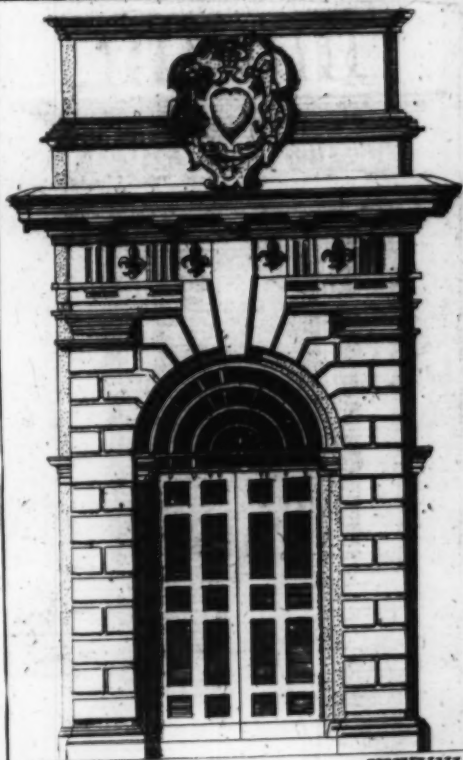


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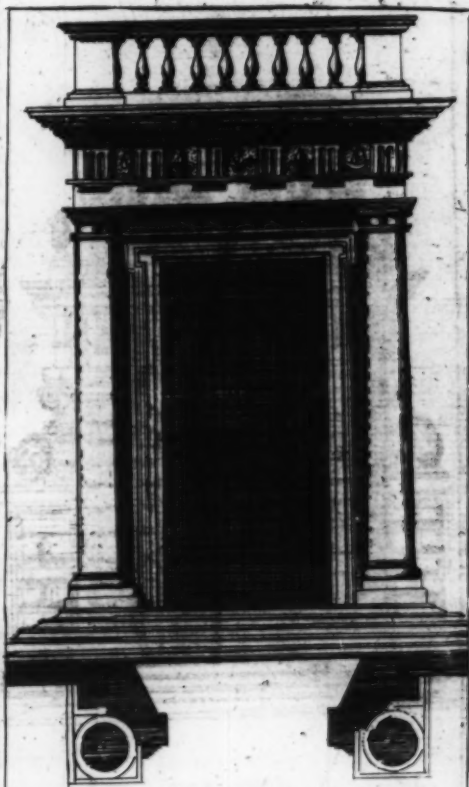




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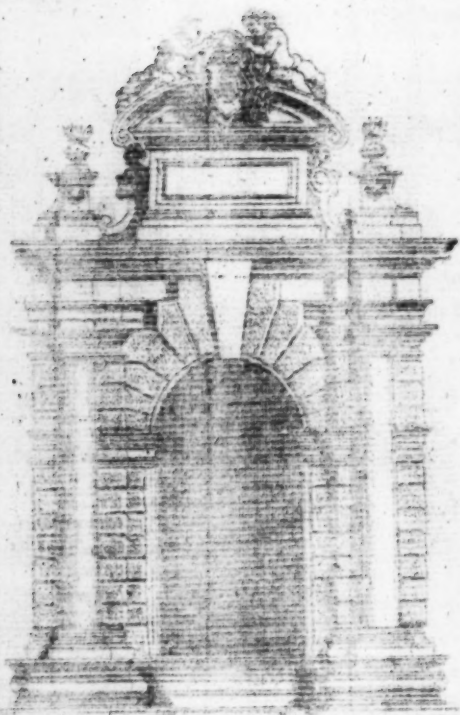


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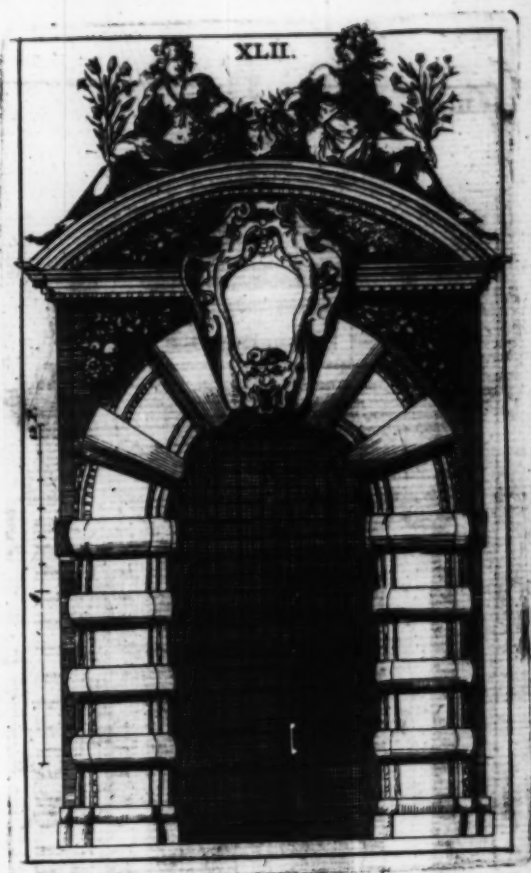


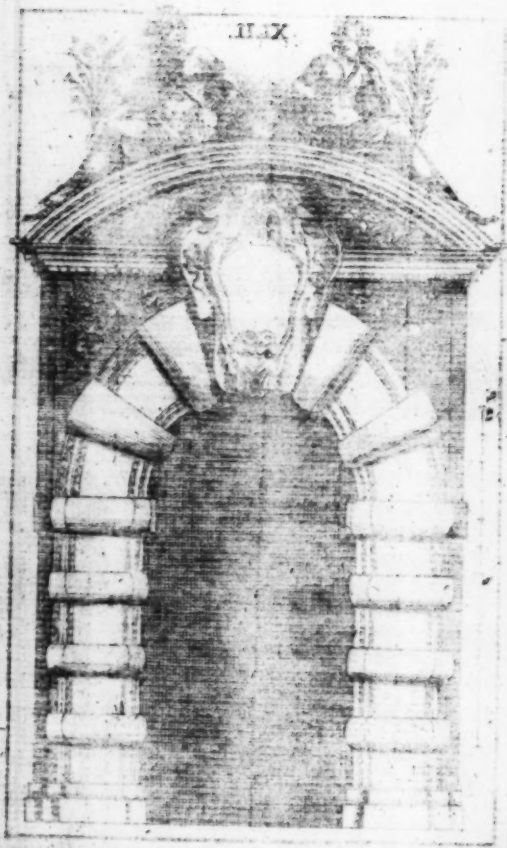


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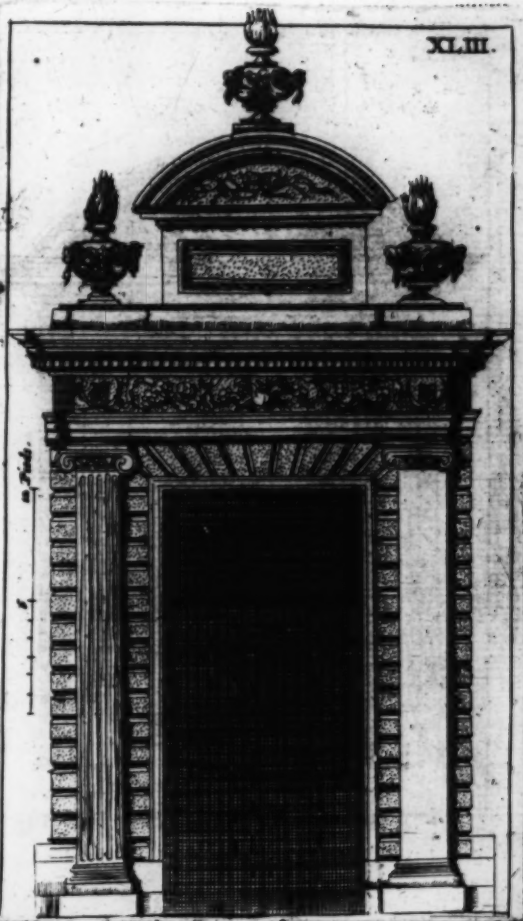


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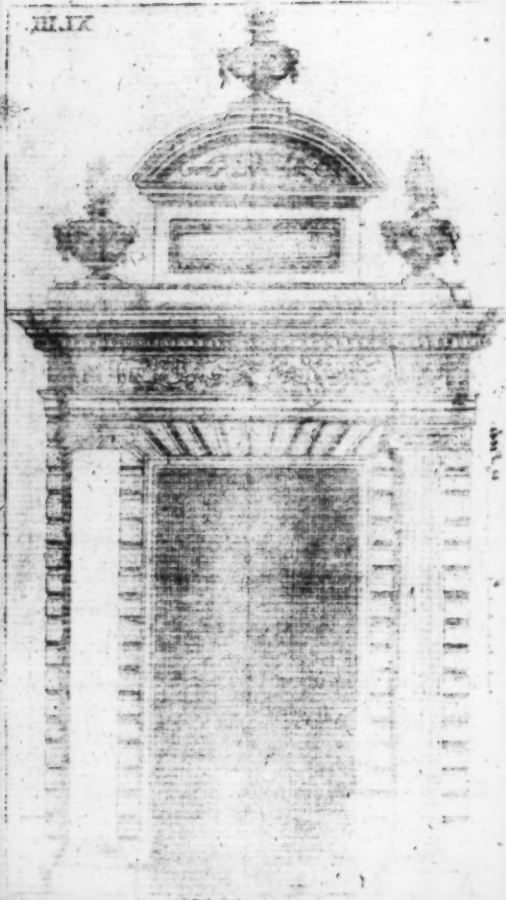




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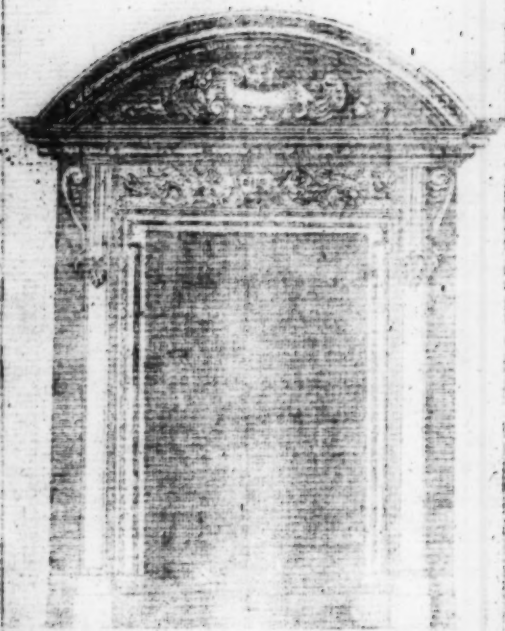


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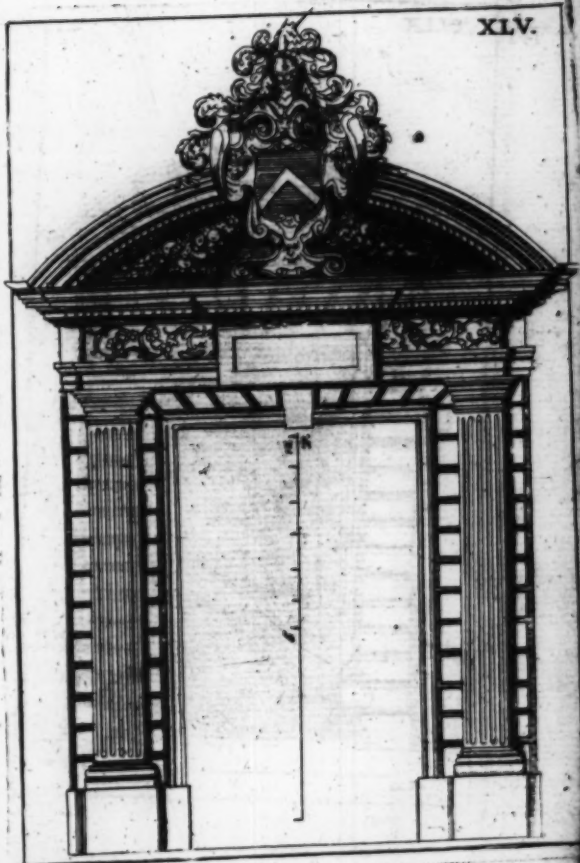


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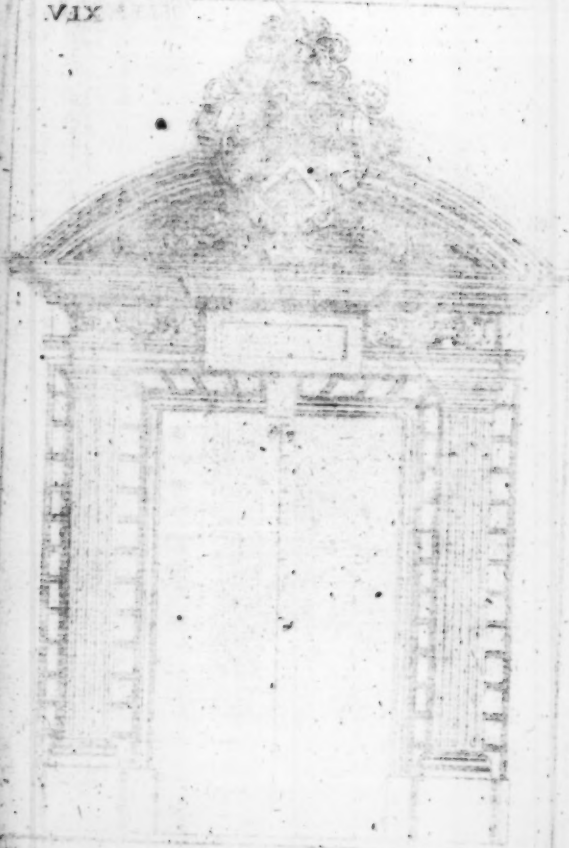
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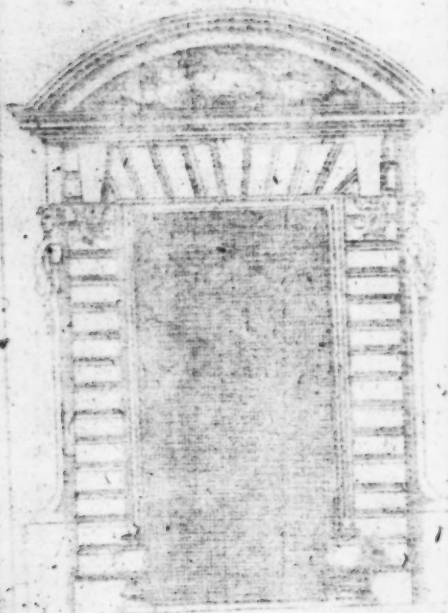
XIX



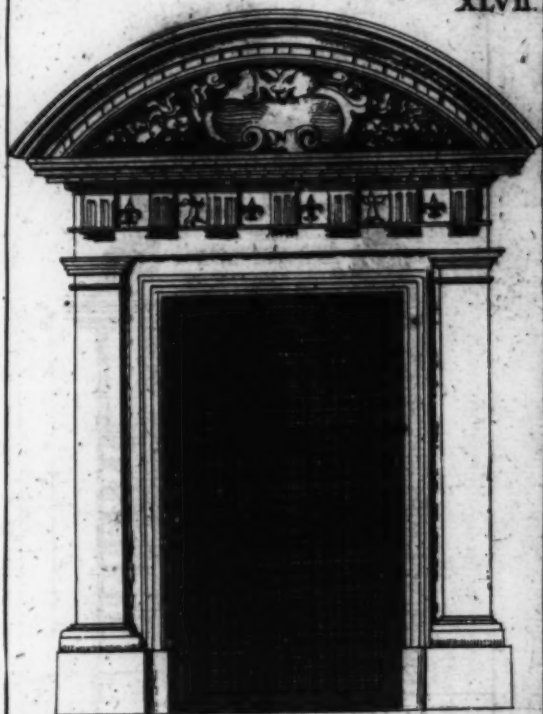
XLVI.



XLIX

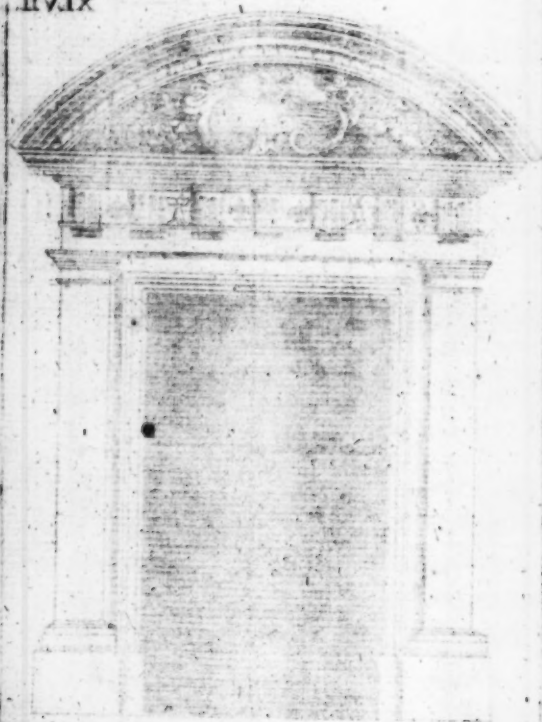


XLVII.



6. 13. 7. 14.

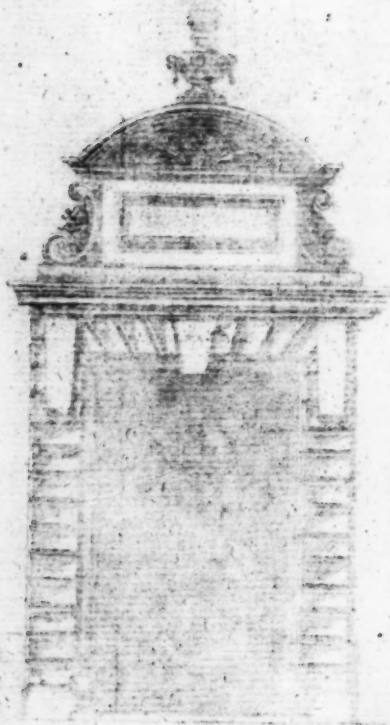
RVIX



XLVIII



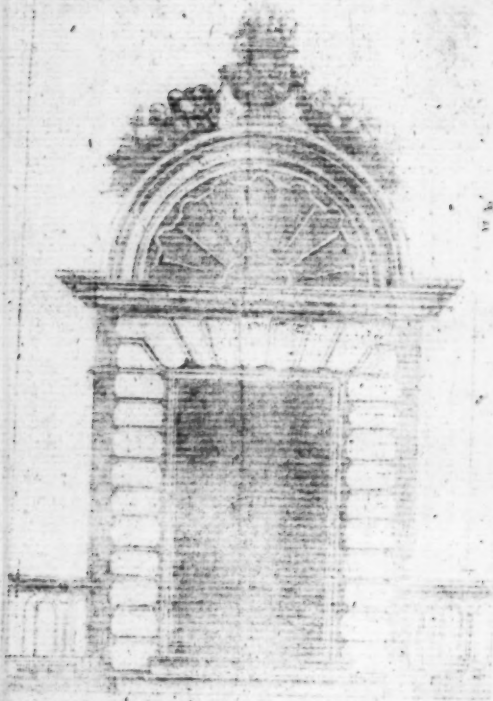
III.VIX





XLIX.

71X



XIX

